FORM PTO-1390 (REV 5-93) U S DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTORNEY'S DOCKET NUMBER 396/50809
TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371		U S APPLICATION NO (if known, see 37 CFR 1 5) 10/050818 (Not Yet Assigned)
INTERNATIONAL APPLICATION NO.	INTERNATIONAL FILING DATE	PRIORITY DATE CLAIMED
PCT/EP00/06400	6 July 2000	13 July 1999

TITLE OF INVENTION

SUPPORTING PROFILE

APPLICANT(S) FOR DO/EO/US

Hans BRUDER

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

1. [X] This is FIRST submission of items concerning a filing under 35 U.S.C. 371.
2. [ ] This is a SECOND or SUBSEQUENT submission of items concerning a filing under 35 U.S.C. 371
3. [X] This express request to begin national examination procedures (35 U.S.C. 371(f) at any time rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 371(b) and PCT Articles 22 and 39(1).
4. [X] A proper Demand for International Preliminary Examination was made by the 19th month from the earliest claimed priority date.
5. [X] A copy of the International Application as filed (35 U.S.C. 371(c)(2)
   a. [ ] is transmitted herewith (required only if not transmitted by the International Bureau).
   b. [X] has been transmitted by the International Bureau **(PCT/IB/308)**
   c. [ ] is not required, as the application was filed in the United States Receiving Office (RO/US)
6. [X] A translation of the International Application into English (35 U.S.C. 371(c)(2).
7. [X] Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))
   a. [ ] are transmitted herewith (required only if not transmitted by the International Bureau).
   b. [ ] have been transmitted by the International Bureau.
   c. [ ] have not been made; however, the time limit for making such amendments has NOT expired.
   d. [X] have not been made and will not be made.
8. [ ] A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3).
9. [X] An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)) **(unexecuted, 1 page; application data sheet)**
10. [X] A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).

Item 11. to 16. below concern other document(s) or information included:

11. [X] An Information Disclosure Statement under 37 CFR 1.97 and 1.98.
12. [ ] An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.
13. [ ] A FIRST preliminary amendment.
    [ ] A SECOND or SUBSEQUENT preliminary amendment.
14. [ ] A substitute specification.
15. [ ] A change of power of attorney and/or address letter.
16. [X] Other items or information: Application Data Sheet, Drawings, PTO 1449 w/Int'l Search Report), Form PCT/IB/308.

U.S. APPLICATION NO (if known, see 37 CFR 1.5) {Not Yet Assigned}	INTERNATIONAL APPLICATION NO PCT/EP00/06400	ATTORNEY'S DOCKET NUMBER 396/50809

17. [X] The following fees are submitted:

	CALCULATIONS	PTO USE ONLY
Basic National Fee (37 CFR 1.492(a)(1)-(5): Search Report has been prepared by the EPO or JPO $890.00	$ 890.00	
International preliminary examination fee paid to USPTO (37 CFR 1.482) $710.00		
No international preliminary examination fee paid to USPTO (37 CFR 1.482) but international search fee paid to USPTO (37 CFR 1.445(a)(2) $740.00		
Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(2) paid to USPTO $1040.00		
International preliminary examination fee paid to USPTO (37 CFR 1.482) and all claims satisfied provisions of PCT Article 33(2)-(4)92.00 ..... $100.00		
ENTER APPROPRIATE BASIC FEE AMOUNT =	$890.00	
Surcharge of $130.00 for furnishing the oath or declaration later than ☐20 ☒30 months from the earliest claimed priority date (37 CFR 1.492(e)).	$130.00	

Claims	Number Field	Number Extra	Rate		
Total Claims	9 - 20=	0	X $18.00	$	
Independent Claims	1 - 3=	0	X $84.00	$	
Multiple dependent claims(s) (if applicable)			+ $280.00	$	
			TOTAL OF ABOVE CALCULATIONS =	$1,020.00	
☐ Applicant Claims Small Entity Status. See 37 CFR 1.27. The fees indicated above are reduced by ½.				$	
			SUBTOTAL =	$1,020.00	
Processing fee of $130.00 for furnishing the English translation later than ☐20 ☐30 months from the earliest claimed priority date (37 CFR 1.492(f)). +				$	
			TOTAL NATIONAL FEE =	$1,020.00	
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28,3.31). $40.00 per property +				$	
			TOTAL FEE ENCLOSED =	$1,020.00	
				Amount to be: refunded	$
				charged	$

a. ☒ A check in the amount of **$1,020.00** to cover the above fees is enclosed.
b. ☐ Please charge my Deposit Account No. 05-1323 in the amount of $_____ to cover the above fees. A duplicate copy of this sheet is enclosed.
c. ☒ The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 05-1323 **(Docket # 396/50809)**. A duplicate copy of this sheet is enclosed.

NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.

SEND ALL CORRESPONDENCE TO:
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Intellectual Property Group
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Washington, D.C. 20044-4300
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Donald D. Evenson
SIGNATURE
Donald D. Evenson
NAME
26,160
REGISTRATION NUMBER
January 14, 2002
DATE

APPLICATION DATA SHEET

INVENTOR INFORMATION

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Country of residence:	GERMANY
Citizenship Country:	Federal Republic of Germany

CORRESPONDENCE INFORMATION

Correspondence customer number:	23911

APPLICATION INFORMATION

Title line one:	SUPPORTING PROFILE
Total drawing sheets:	2
Formal drawings?:	Yes
Application type:	Utility
Docket Number:	396/50809

REPRESENTATIVE INFORMATION

Representative customer number:	23911

PRIOR FOREIGN APPLICATIONS

Foreign application one:	299 12 201.8
Filing date:	July 13, 1999
Country:	Federal Republic of Germany
Priority claimed:	Yes

Attorney Docket: 396/50809
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: HANS BRUDER

Serial No.: 10/030,818

Filed: January 14, 2002

Title: SUPPORTING PROFILE

PRELIMINARY AMENDMENT

Box Non-Fee Amendment
Commissioner for Patents
Washington, D.C. 20231

Sir:

Please enter the following amendments to the specification and claims prior to the examination of the application.

IN THE SPECIFICATION:

A substitute specification and its marked-up version is submitted herewith.

IN THE CLAIMS:

Please amend claims 1-9 as follows **(a copy of the marked-up version of the amended claims is attached hereto)**:

1. (Amended) Supporting profile for a system for erecting structures comprising:

longitudinally extending grooves on outside, which grooves are used for the connection of additional supporting profiles or structural parts of the construction system, a slid-in adapter piece at at least one of its open ends, the

adapter piece having a receiving chamber for a turnbuckle, wherein the adapter piece is inserted in guides pointing toward the interior of the supporting profile and is axially held by means of securing devices which are inserted in bores penetrating the guides,

wherein a disk-type end piece, which is adapted to the cross-section of the supporting profile, is provided for being placed on at least the open face of the supporting profile and is connected with the adapter piece.

2. (Amended) Supporting profile according to Claim 1,

wherein the end piece is constructed as a formed body with a concave recess which is adapted to the external curvature of a round profile.

3. (Amended) Supporting profile according to Claim 2,

wherein the formed body is provided with a passage opening for the guiding-through of a turnbuckle.

4. (Amended) Supporting profile according to Claim 1,

wherein the end piece is provided with a joint part for the connection with additional profiles.

5. (Amended) Supporting profile according to Claim 4,

wherein the joint part includes a first disk which extends perpendicular to the end piece and has a center bore and includes an additional second disk which is connected with the first disk by means of a bolt acting as an axis of rotation and which is equipped with fastening devices for another profile.

11. (New) The supporting profile according to Claim 10,

wherein the end piece has a concave recess adapted to an external curvature of a round profile.

12. (New) The supporting profile according to Claim 11,

wherein the end piece has an opening for the turnbuckle to pass through.

13. (New) The supporting profile according to Claim 10,

wherein the end piece has a joint for connection to another profile.

14. (New) The supporting profile according to Claim 13,

wherein the joint includes a first disk which extends perpendicular to the end piece and has a center bore, and a second disk having a center bore and being connected with the first disk by means of a bolt extending through the center bores and acting as an axis of rotation, the second disk having a fastening device for connection to another profile.

15. (New) The supporting profile according to Claim 14,

wherein the second disk is connected to another end piece.

16. (New) The supporting profile according to Claim 14,

wherein the second disk has a clamping part that is configured for insertion into a longitudinal grooves of another supporting profile.

17. (New) The supporting profile according to Claim 14 further comprising first and second hemispheres for covering two sides of each of the first and second disks.

18. (New) The supporting profile according to Claim 17,

wherein each hemisphere has a threaded center bore and can be screwed onto a threaded end of the bolt.

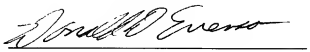
REMARKS

Entry of the amendments to the specification and claims before examination of the application is respectfully requested.

If there are any questions regarding this Preliminary Amendment or this application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

Respectfully submitted,

June 7, 2002



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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS

Please amend claims 1-9 as follows:

1. (Amended) Supporting profile for a system for erecting structures [which is provided with] comprising:

longitudinally extending grooves on [the] outside, which grooves are used for the connection of additional supporting profiles [(1, 1a)] or structural parts of the construction system, [the carrying profile, in the area of at least one of its open front ends, having] a slid-in adapter piece at at least one of its open ends, the adapter piece having [(3) which is provided with] a receiving chamber (23) for a turnbuckle, wherein the adapter piece is inserted in guides pointing toward the interior of the supporting profile [(1, 1a)] and is axially held by means of securing devices which are inserted in bores penetrating the guides,

[characterized in that] wherein a disk-type end piece [(5, 24)], which is adapted to the cross-section of the supporting profile [(1, 1a)], is provided for being placed on at least the open face of the supporting profile and is connected with the adapter piece [(3)].

2. (Amended) Supporting profile according to Claim 1,

[characterized in that] wherein the end piece [(24)] is constructed as a formed body with a concave recess [(25)] which is adapted to the external curvature of a round profile.

3. (Amended) Supporting profile according to Claim 2,

[characterized in that] wherein the formed body [(24)] is provided with a passage opening [(26)] for the guiding-through of a turnbuckle.

4. (Amended) Supporting profile according to Claim 1,

[characterized in that] wherein the end piece [(5, 5a)] is provided with a joint part [(9, 11)] for the connection with additional profiles.

5. (Amended) Supporting profile according to Claim 4,

[characterized in that] wherein the joint part [consists of] includes a first disk [(9)] which extends perpendicular to the end piece [(5, 5a)] and has a center bore [(10)] and [of] includes an additional second disk [(9)] which is connected with the first disk [(9)] by means of a bolt [(11)] acting as an axis of rotation and which is equipped with fastening devices for another profile.

6. (Amended) Supporting profile according to Claim 5,

[characterized in that] wherein the second disk [(9)] is connected with another end piece [(5, 5a)].

7. (Amended) Supporting profile according to Claim 5,

[characterized in that] wherein the second disk [9] is provided with a clamping part [(16, 17)] for the insertion into one of the longitudinally extending grooves [(2)] of another supporting profile [(1)].

8. (Amended) Supporting profile according to Claim 5,

[characterized in that] wherein hemispheres [(13)] are provided for the lateral covering of the disks [(9)].

9. (Amended) Supporting profile according to Claim 8,

[characterized in that] wherein the hemispheres [(13)] have a center bore [(14)] with a thread and, by means of this thread, are screwed onto a thread at the ends of the bolt [(11)] penetrating the disks [(9)].

Please add the following new claims:

10. (New) A supporting profile for erecting a structure comprising:

an elongated hollow body having first and second ends and a longitudinal groove on outside of the body, the carrying profile;

an adapter piece inserted into and secured to the first end of the elongated body, the adapter piece having a receiving chamber for receiving a turnbuckle; and

a disk-type end piece disposed at the first end and connected to the adapter piece.

11. (New) The supporting profile according to Claim 10,

wherein the end piece has a concave recess adapted to an external curvature of a round profile.

12. (New) The supporting profile according to Claim 11,

wherein the end piece has an opening for the turnbuckle to pass through.

13. (New) The supporting profile according to Claim 10,

wherein the end piece has a joint for connection to another profile.

14. (New) The supporting profile according to Claim 13,

wherein the joint includes a first disk which extends perpendicular to the end piece and has a center bore, and a second disk having a center bore and being connected with the first disk by means of a bolt extending through the center bores and acting as an axis of rotation, the second disk having a fastening device for connection to another profile.

15. (New) The supporting profile according to Claim 14,

wherein the second disk is connected to another end piece.

16. (New) The supporting profile according to Claim 14,

wherein the second disk has a clamping part that is configured for insertion into a longitudinal grooves of another supporting profile.

17. (New) The supporting profile according to Claim 14 further comprising first and second hemispheres for covering two sides of each of the first and second disks.

18. (New) The supporting profile according to Claim 17,

wherein each hemisphere has a threaded center bore and can be screwed onto a threaded end of the bolt.

Attorney Docket: 396/50809
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: HANS BRUDER

Serial No.: 10/030,818

Filed: JANUARY 14, 2002

Title: SUPPORTING PROFILE

SUBMISSION OF SUBSTITUTE SPECIFICATION

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

Attached is a Substitute Specification and a marked-up copy of the original specification. I certify that said substitute specification contains no new matter and includes the changes indicated in the marked-up copy of the original specification.

Respectfully submitted,

June 7, 2002

Donald D. Evenson
Registration No. 26,160
Song Zhu
Registration No. 44,420

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DDE/SZ/ajf

SUPPORTING PROFILE

BACKGROUND AND SUMMARY OF THE INVENTION

The invention relates to a supporting profile for a system for erecting structures such as for fairs, exhibits or stores a generic system of this type is conventionally provided with longitudinally extending exterior grooves for connecting additional supporting profiles or structural parts of the construction system. In a core area, a receiving chamber for a turnbuckle is provided, being integrated into a first adapter piece which is inserted in guides pointing toward the interior of the supporting profile, and held axially by means of securing devices which are inserted in bores penetrating the guides.

A supporting profile of this type disclosed in German Patent Document DE-U 298 21 204 has a hollow profile, into which an adapter piece is in each case inserted and axially fastened on the faces. The adapter piece has axially extending chambers for receiving at least one turnbuckle which, in turn, can be utilized for fastening such supporting profiles on externally extending grooves of additional supporting profiles of the same or a similar type on the face side.

Supporting profiles of this type have a relatively low weight because they are provided with the adapter pieces only on their faces and otherwise remain hollow.

For fair and exhibition constructions, as well as for store constructions, it is often desirable to have structures are often desirable which require an angular arrangement of supporting profiles with respect to one another. This is not

possible in the case of the supporting profile of the above-mentioned type. Other known supporting profiles also can not easily be used for the desired constructions.

It is therefore an object of the present invention to further develop supporting profiles of the initially mentioned type such that additional uses are possible or that well-designed further developments can be achieved.

To achieve this object, in the case of a supporting profile of the initially mentioned type, an end disk, which is adapted to the cross-section of the supporting profile, is provided on at least one open face of the supporting profile and is connected with the adapter piece. This results in a simple embodiment.

In a further development of the invention, the end disk may be constructed as a formed body with a concave recess which is adapted to the external curvature of a round profile. The face-side mutual connection of round profiles can take place in this manner without unattractive gaps and without the requirement of cumbersome work of inserting adapting pieces during the assembly. The end disks are fixedly disposed on the face of the assigned supporting profile. As a further development of this embodiment, the formed body may also be provided with a passage opening for guiding through a turnbuckle which will then permit the fastening of the supporting profile on the external grooves of another profile. The turnbuckle is axially held in the interior of the supporting profile by the initially mentioned adapter piece. It was found in this case that the turnbuckle can also be utilized for holding the end disk on the face of the supporting profile. When the turnbuckle is placed in an external

groove of another profile, by means of this tensioning operation, the end disk is simultaneously also fixedly clamped in. Therefore, a separate fastening of the end disk on the face will only become necessary when the assigned supporting profile accommodates no turnbuckle.

As a further development of the invention, the end disk may also be provided with a joint part for connection with additional profiles. The joint part may include a disk which extends perpendicular to the end disk and has a center bore. The joint part may include a second disk which is connected with the first disk by means of a bolt acting as an axis of rotation and which is equipped with fastening devices for another profile. When the second disk is connected with another end disk, this embodiment will permit the joint-type joining of the faces of two supporting profiles.

As a further development of the invention, the second disk is provided with a clamping part for the insertion into one of the longitudinally extending grooves of another supporting profile allowing the articulated connection of a supporting profile to the longitudinal side of a first profile.

As a further development of the invention, in order to attractively cover the outside of the disks serving as a joint, hemispheres can be provided for the lateral covering of the disks. These hemispheres, as a further development of the invention, have a center bore with a thread and by means of this thread are screwable upon a thread at the ends of the bolt penetrating the disks.

The invention is illustrated in the drawing by means of embodiments and will be explained in the following.

BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 is a perspective partial view of further developed supporting profiles according to the invention which are mutually connected by way of a joint;

Figure 2 is an exploded view of the arrangement according to Figure 1;

Figure 3 is a view of one of the end disks used in the embodiment according to Figure 1;

Figure 4 is a face-side view of one of the supporting profiles according to Figures 1 and 2;

Figure 5 is a view of a clamping piece for the connection with an end disk according to Figure 3 for a fastening to an external groove of a supporting profile;

Figure 6 is a view of the insert of the clamping piece of Figure 5 for the articulated arrangement of two profiles;

Figure 7 is a view of the supporting profiles according to the invention similar to Figure 1 but with a square cross-section;

Figure 8 is a representation similar to Figure 6 but with supporting profiles with a square cross-section;

Figure 9 is a perspective partial view of three supporting profiles with a round cross-section which are assembled to form a junction point;

Figure 10 is a schematic sectional view of the junction point according to Figure 9;

arrangement according to Figure 1 therefore permits the articulated joining of two supporting profiles in each case by the arrangement of end disks.

Figures 5 and 6 show a variant of the embodiment shown in Figure 1. In Figures 5 and 6, the disk 9 of an end disk 5', which has a smaller diameter than the end disks 5 of Figures 1 to 4, is connected with a disk body 15 (Figure 5) whose attachment 16 is not fastened to an end disk. The attachment 16 interacts with a clamping piece 17 which, by way of a screw guided through the bores 18 and a pertaining nut 20, is held on the lug 16 so that it can be swivelled from side to side. Two clamping screws 21 are inserted into threaded bores 22 of the clamping piece 17 and can, in each case, press the free edge 17a of the clamping piece away from the free edge 16a. The free edge 16a has an elevation projecting toward the outside, so that, as illustrated by Figure 6, the clamping piece is first slid into the open side of the groove 2 and is then laterally spread open, so that the parts 17 and 16 are jammed inside the groove. In the embodiment of Figure 6, the supporting profiles 1 and 1', which have different diameters, can thereby be connected in an articulated manner.

Figures 7 and 8 show embodiments similar to those of Figures 1 and 6, but the supporting profiles 1a and 1a' each have a square cross-section and, for this reason, the end disks 5a each also have a square construction. In this case, the supporting profile 1a' has smaller dimensions. Otherwise, the construction of the joint itself corresponds to that of Figures 1 and 2 or to the further development according to Figures 5 and 6. It is also possible to combine the end disks 5a or 5a' having the square cross-section with end disks 5 or 5' by way of a joint (disks

9), so that supporting profiles 1 or 1' can be mounted in an articulated manner on supporting profiles 1a, 1a'.

Figure 9 shows an arrangement in which two supporting profiles 1 with a round cross-section are fastened in a horizontally aligned manner on a vertically aligned supporting profile 1 in known fashion. A turnbuckle is inserted into the rectangular center chamber 23 of the adapter piece 3 (Figure 4). The turnbuckle, as described, for example, in German Patent Document DE-U 298 21 204, is used for fastening the horizontal supporting profiles 1 to the grooves 2 of the vertical supporting profile 1. In order to avoid an unattractive wedge-shaped space between the plane faces of the horizontal supporting profile 1 and the curvature of the vertical supporting profile 1, an end disk 24, as shown in Figures 10 to 12, is provided which is constructed as a formed body with a concave curvature 25. The end disk 24 also provides a more stable joint. As illustrated in Figures 11 and 12, this end disk 24 has a central opening 26 for the turnbuckle to pass through. On both sides of this opening 26, the end disk 24 has two openings 27 through which the screws can pass through and can be screwed into the openings 7 of the adapter piece 3. In this manner, the end disk 24 can be fixedly connected with the corresponding supporting profile 1. However, it was found that such a fastening by means of screws is not absolutely necessary if the turnbuckle is slid in the above-mentioned manner into the supporting profile with the end disk 24. The reason is that the turnbuckle, which is then axially anchored in the adapter piece 3, can also interact with the opening 26 as a stop and can hold the end disk 24 on the face of a supporting profile 1 without the requirement of special fastening operations. If the supporting profile 1, which in

the embodiment shown in Figure 9 is aligned horizontally, is anchored by means of the turnbuckle in the groove 2, the concave recess 25 of the end disk 24 constructed as a formed piece are pressed firmly against the face of the supporting profile 1 and secured. Naturally, it would also be conceivable here to provide end disks 24 with a square cross-section so that supporting profiles 1a, 1a' with a square cross-section can be connected in a perpendicular manner to supporting profiles 1, 1' having a round cross-section.

Figures 10 and 12 also outline another variant. A sleeve-shaped attachment 28, illustrated by a broken line, may be part of the end disk 24 and may secure the end disk 24 on the face of the assigned supporting profile in a manner known per se by means of screws laterally introduced as shown by the dash-dotted lines 29 in Figure 10.

The construction according to the invention therefore opens up variation possibilities for combining supporting profiles which can be utilized particularly in constructions for fairs, exhibitions or stores for new structural variants.

SUPPORTING PROFILE

BACKGROUND AND SUMMARY OF THE INVENTION

The invention relates to a supporting profile for a system for erecting structures[, particularly for constructions] such as for fairs, exhibits or stores[, which] a generic system of this type is conventionally provided with longitudinally extending exterior grooves [on the outside, which grooves are used] for [the connection of] connecting additional supporting profiles or structural parts of the construction system[, in the]. In a core area, a receiving chamber for a turnbuckle [being] is provided, [which receiving chamber is] being integrated [in the] into a first adapter piece which is inserted in guides pointing toward the interior of the supporting profile, and [is axially held] held axially by means of securing devices which are inserted in bores penetrating the guides.

A supporting profile of this type [is known from] disclosed in German Patent Document DE-U 298 21 204[. This profile is] has a hollow profile, into which an adapter piece [was] is in each case inserted and axially fastened on the faces[, which]. The adapter piece has axially extending chambers for receiving at least one turnbuckle which, in turn, can be utilized for fastening such supporting profiles on [the] externally extending grooves of additional supporting profiles of the same or a similar type on the face side.

Supporting profiles of this [prior art] type have a relatively low weight because they are provided with the adapter pieces only on their faces and otherwise remain hollow.

For fair and exhibition constructions, [optionally also] as well as for store constructions, [however,] it is often desirable to have structures are often desirable which require an angular arrangement of supporting profiles with respect to one another[, which]. This is not possible in the case of the supporting profile of the above-mentioned type. Other known supporting profiles also can [also] not easily be used for [such] the desired constructions.

It is therefore an object of the present invention to further develop supporting profiles of the initially mentioned type such that additional uses are possible [usage possibilities exist] or that well-designed further developments can be achieved.

[For achieving] To achieve this object, in the case of a supporting profile of the initially mentioned type, [it is provided that] an end disk, which is adapted to the cross-section of the supporting profile, is provided [for being placed] on at least one open face of the supporting profile and is connected with the adapter piece. This results in a simple embodiment.

In a further development of the invention, the end disk may be constructed as a formed body with a concave recess which is adapted to the external curvature of a round profile. The face-side mutual connection of round profiles can take place in this manner [so that no] without unattractive gaps [remain] and without the requirement of cumbersome work [for] of inserting adapting pieces during the assembly. The end disks are fixedly disposed on the face of the assigned supporting profile[, and, as]. As a further development of this embodiment, the formed body may also be provided with a passage opening

for guiding through a turnbuckle which will then permit the fastening of the supporting profile on the external grooves of another profile. The turnbuckle is axially held in the interior of the supporting profile by the initially mentioned adapter piece. It was found in this case that the turnbuckle[, which is axially held in the interior of the supporting profile by the initially also mentioned adapter piece,] can also be utilized for holding the end disk on the face of the supporting profile. When the turnbuckle is [then] placed in an external groove of another profile, by means of this tensioning operation, the end disk is simultaneously also fixedly clamped in[, so that]. Therefore, a separate fastening of the end disk on the face will only become necessary when the assigned supporting profile accommodates no turnbuckle.

As a further development of the invention, the end disk may[, however,] also be provided with a joint part for [the] connection with additional profiles. The joint part may [consist of] include a disk which extends perpendicular to the end disk and has a center bore [and of an additional]. The joint part may include a second disk which is connected with the first disk by means of a bolt acting as an axis of rotation and which is equipped with fastening devices for another profile. [This embodiment will then, when the second disk is connected with another end disk,] When the second disk is connected with another end disk, this embodiment will permit the joint-type joining of the faces of two supporting profiles.

[When, as] As a further development of the invention, the second disk is provided with a clamping part for the insertion into one of the longitudinally

extending grooves of another supporting profile[, this further development will then permit] allowing the articulated connection of a supporting profile to the longitudinal side of a first profile.

As a further development of the invention, in [In] order to attractively cover [toward] the outside of the disks serving as a joint, [as a further development of the invention,] hemispheres can be provided for the lateral covering of the disks[, these]. These hemispheres, as a further development of the invention, [having] have a center bore with a thread and by means of this thread [being] are screwable upon a thread at the ends of the bolt penetrating the disks.

The invention is illustrated in the drawing by means of embodiments and will be explained in the following.

BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 is a perspective partial view of further developed supporting profiles according to the invention which are mutually connected by way of a joint;

Figure 2 is an exploded view of the arrangement according to Figure 1;

Figure 3 is a view of one of the end disks used in the embodiment according to Figure 1;

Figure 4 is a face-side view of one of the supporting profiles according to Figures 1 and 2;

Figure 5 is a view of a clamping piece for the connection with an end disk according to Figure 3 for a fastening to an external groove of a supporting profile;

Figure 6 is a view of the insert of the clamping piece of Figure 5 for the articulated arrangement of two profiles;

Figure 7 is a view of the supporting profiles according to the invention similar to Figure 1 but with a square cross-section;

Figure 8 is a representation similar to Figure 6 but with supporting profiles with a square cross-section;

Figure 9 is a perspective partial view of three supporting profiles with a round cross-section which are assembled to form a junction point;

Figure 10 is a schematic sectional view of the junction point according to Figure 9;

Figure 11 is a view of one of the end disks used for assembling the profiles according to Figures 9 and 10; and

Figure 12 is a lateral view of the end disk according to Figure 11.

DETAILED DESCRIPTION OF THE DRAWINGS

Figures 1 to 4 show a first embodiment of the invention. Here, two supporting profiles 1 [are provided which] each have a round cross-section and [which], on their outer circumference, [are provided with] longitudinally extending grooves 2. At [and which, in the area of] their open front ends, the supporting profiles each have a slid-in adapter piece 3 which is held in [its] the

axial position by screws 4 laterally inserted into the corresponding openings. This adapter piece 3 is utilized for fastening an end disk 5 [which is fastened] on the face side [on] of the supporting profile 1 by means of screws 6 which are threaded [engage] in the threaded openings 7 of the adapter piece 3. A lug having [with] an end in the shape of a disk 9 is fastened on the end disk[s] 5[, in each case projecting] and extends perpendicularly from the disk surface[, which]. The disk 9, as illustrated particularly in Figure 3, is provided with a center bore 10. A bolt 11, [which is provided with a thread] threaded at least at one of its two ends, is guided through [this] the center bores 10 of[, which thread has the purpose of connecting] the [two] disk-type ends 9 of both end disks 5, connecting the end disks 5 in a mutually rotatable manner[, which]. The end disks 5 are each mounted in the above-described manner on the face side on the supporting profiles 1. Nuts 12 hold the two disks 9 against one another. In order to permit a tool-less assembly, [instead of the nuts 12,] butterfly nuts instead of the nuts 12 may be used in this case. The disks are then, for aesthetic reasons, covered on [toward] the outside by [means of one] hemispheres 13 respectively[, which]. Each hemisphere is screwed onto the thread of the respective bolt 11 by means of a threaded part 14 provided in the hemisphere 13. The arrangement according to Figure 1 therefore permits the articulated joining of two supporting profiles in each case by the arrangement of end disks [in a corresponding further development].

Figures 5 and 6 show a variant of the [further development according to] embodiment shown in Figure 1. [Here,] In Figures 5 and 6, the disk 9 of an end

disk 5', which [in the embodiment according to Figure 6] has a smaller diameter than the end disks 5 of Figures 1 to 4, is connected with a disk body 15 (Figure 5) whose attachment 16 is[, however,] not fastened to an end disk. [On the contrary, the] The attachment 16 interacts with a clamping piece 17 which, by way of a screw guided through the bores 18 and a pertaining nut 20, is held on the lug 16 so that it can be swivelled from side to side. [away to the side.] Two clamping screws 21 are inserted into threaded bores 22 of the clamping piece 17 and can, in each case, press the free edge 17a of the clamping piece away from the free edge 16a [which is provided with]. The free edge 16a has an elevation projecting toward the outside, so that, as illustrated by Figure 6, the clamping piece is first slid into the open side of the groove 2 and is then laterally spread open, so that the parts 17 and 16 are jammed inside the groove. In the embodiment of Figure 6, the supporting profiles 1 and 1', which have different diameters, can thereby be connected in an articulated manner.

Figures 7 and 8 show embodiments similar to those of Figures 1 and 6, but [with the difference that] the supporting profiles 1a and 1a' [respectively provided there] each have a square cross-section and, for this reason, the end disks 5a each [placed on the end side] also have a square construction. In this case, the supporting profile 1a' has [is provided with] smaller dimensions. Otherwise, the construction of the joint itself corresponds to that of Figures 1 and 2 or to the further development according to Figures 5 and 6. It is also possible to combine the end disks 5a or 5a' having the square cross-section [by way of a joint (disks 9)] with end disks 5 or 5' by way of a joint (disks 9), so that [also]

supporting profiles 1 or 1' [with a round cross-section] can be mounted in an articulated manner on supporting profiles 1a, 1a'.

Figure 9 shows an arrangement in which two supporting profiles 1 with a round cross-section are fastened in a horizontally aligned manner on a vertically aligned supporting profile 1 [which takes place] in known fashion. A [in that a] turnbuckle is inserted into the rectangular center chamber 23 [with a rectangular cross-section] of the adapter piece 3 (Figure 4)[, which]. The turnbuckle, as described, for example, in German Patent Document DE-U 298 21 204, is used for fastening the horizontal supporting profiles 1 to the grooves 2 of the vertical supporting profile 1. In order to avoid an unattractive wedge-shaped space [that] between the plane faces of the horizontal supporting profile 1 [joined to] and the curvature of the vertical supporting profile 1 [leave open an unattractive wedge-shaped space toward the outside and, as a result, are also not fastened in a sufficiently stable manner, according to Figures 10 to 12], an end disk 24, as shown in Figures 10 to 12, is provided which is constructed as a formed body with a concave curvature 25. The end disk 24 also provides a more stable joint. As illustrated in Figures 11 and 12, this end disk 24 has a central opening 26 for [the guiding through of] the [above-mentioned] turnbuckle to pass through. On [and, on] both sides of this opening 26, the end disk 24 has two [respective] openings 27 through which the screws can pass through [be guided which then, as mentioned above by means of Figure 4 for the end disks 5,] and can be screwed into the openings 7 of the adapter piece 3. In this manner, the end disk 24 can be fixedly connected with the [assigned] corresponding

supporting profile 1. However, it was found that such a fastening by means of screws is not absolutely necessary if the turnbuckle is slid in the above-mentioned manner into the supporting profile with the [placed] end disk 24. The reason is that the turnbuckle, which is then axially anchored in the adapter piece 3, [in the case of a corresponding construction,] can also interact with the opening 26 as a stop and [in this manner] can hold the end disk 24 on the face of a supporting profile 1 without the requirement of special fastening operations [by means of screws]. If the supporting profile 1, which in the embodiment [according to] shown in Figure 9 is aligned horizontally, is anchored by means of the turnbuckle in the groove 2, [as a result of this fastening operation,] the concave recess 25 of the end disk 24 constructed as a formed piece [and the latter, in turn,] are pressed firmly against the face of the supporting profile 1 and secured. Naturally, it would also be conceivable here to provide end disks 24 with a square cross-section so that [also] supporting profiles 1a, 1a' with a square cross-section can be connected in a perpendicular manner to supporting profiles 1, 1' having a round cross-section.

Figures 10 and 12 also outline another variant. A sleeve-shaped attachment 28, [is] illustrated by a broken line, [which] may be part of the end disk 24 and may secure [which permits the securing of] the end disk 24 on the face of the assigned supporting profile in a manner known per se by means of screws laterally introduced [in the sense of] as shown by the dash-dotted lines 29 in Figure 10.

The construction according to the invention therefore opens up variation possibilities for combining supporting profiles which can be utilized particularly in constructions for fairs, exhibitions or stores for new structural variants.

2/PRTS

Translation of PCT/EP00/06400
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SUPPORTING PROFILE

The invention relates to a supporting profile for a system for erecting structures, particularly for constructions for fairs, exhibits or stores, which is provided with longitudinally extending grooves on the outside, which grooves are used for the connection of additional supporting profiles or structural parts of the construction system, in the core area, a receiving chamber for a turnbuckle being provided, which receiving chamber is integrated in the first adapter piece which is inserted in guides pointing toward the interior of the supporting profile and is axially held by means of securing devices which are inserted in bores penetrating the guides.

A supporting profile of this type is known from German Patent Document DE-U 298 21 204. This profile is a hollow profile, into which an adapter piece was in each case inserted and axially fastened on the faces, which adapter piece has axially extending chambers for receiving at least one turnbuckle which, in turn, can be utilized for fastening such supporting profiles on the externally extending grooves of additional supporting profiles of the same or a similar type on the face side.

Supporting profiles of this prior art have a relatively low weight because they are provided with the adapter pieces only on their faces and otherwise remain hollow.

For fair and exhibition constructions, optionally also for store constructions, however, structures are often desirable which require an angular arrangement of supporting profiles with respect to one another, which is not

possible in the case of the supporting profile of the above-mentioned type. Other known supporting profiles can also not easily be used for such constructions.

It is therefore an object of the present invention to further develop supporting profiles of the initially mentioned type such that additional usage possibilities exist or that well-designed further developments can be achieved.

For achieving this object, in the case of a supporting profile of the initially mentioned type, it is provided that an end disk, which is adapted to the cross-section of the supporting profile, is provided for being placed on at least one open face of the supporting profile and is connected with the adapter piece. This results in a simple embodiment.

In a further development of the invention, the end disk may be constructed as a formed body with a concave recess which is adapted to the external curvature of a round profile. The face-side mutual connection of round profiles can take place in this manner so that no unattractive gaps remain and without the requirement of cumbersome work for inserting adapting pieces during the assembly. The end disks are fixedly disposed on the face of the assigned supporting profile, and, as a further development of this embodiment, the formed body may also be provided with a passage opening for guiding through a turnbuckle which will then permit the fastening of the supporting profile on the external grooves of another profile. It was found in this case that the turnbuckle, which is axially held in the interior of the supporting profile by the initially also mentioned adapter piece, can also be utilized for holding the end disk on the face of the supporting profile. When the turnbuckle is then placed in

an external groove of another profile, by means of this tensioning operation, the end disk is simultaneously also fixedly clamped in, so that a separate fastening of the end disk on the face will only become necessary when the assigned supporting profile accommodates no turnbuckle.

As a further development of the invention, the end disk may, however, also be provided with a joint part for the connection with additional profiles. The joint part may consist of a disk which extends perpendicular to the end disk and has a center bore and of an additional second disk which is connected with the first disk by means of a bolt acting as an axis of rotation and which is equipped with fastening devices for another profile. This embodiment will then, when the second disk is connected with another end disk, permit the joint-type joining of the faces of two supporting profiles.

When, as a further development of the invention, the second disk is provided with a clamping part for the insertion into one of the longitudinally extending grooves of another supporting profile, this further development will then permit the articulated connection of a supporting profile to the longitudinal side of a first profile.

In order to attractively cover toward the outside the disks serving as a joint, as a further development of the invention, hemispheres can be provided for the lateral covering of the disks, these hemispheres, as a further development of the invention, having a center bore with a thread and by means of this thread being screwable upon a thread at the ends of the bolt penetrating the disks.

The invention is illustrated in the drawing by means of embodiments and will be explained in the following.

Figure 1 is a perspective partial view of further developed supporting profiles according to the invention which are mutually connected by way of a joint;

Figure 2 is an exploded view of the arrangement according to Figure 1;

Figure 3 is a view of one of the end disks used in the embodiment according to Figure 1;

Figure 4 is a face-side view of one of the supporting profiles according to Figures 1 and 2;

Figure 5 is a view of a clamping piece for the connection with an end disk according to Figure 3 for a fastening to an external groove of a supporting profile;

Figure 6 is a view of the insert of the clamping piece of Figure 5 for the articulated arrangement of two profiles;

Figure 7 is a view of the supporting profiles according to the invention similar to Figure 1 but with a square cross-section;

Figure 8 is a representation similar to Figure 6 but with supporting profiles with a square cross-section;

Figure 9 is a perspective partial view of three supporting profiles with a round cross-section which are assembled to form a junction point;

Figure 10 is a schematic sectional view of the junction point according to Figure 9;

Figure 11 is a view of one of the end disks used for assembling the profiles according to Figures 9 and 10; and

Figure 12 is a lateral view of the end disk according to Figure 11.

Figures 1 to 4 show a first embodiment of the invention. Here, two supporting profiles 1 are provided which have a round cross-section and which, on their outer circumference, are provided with longitudinally extending grooves 2 and which, in the area of their open front ends, have a slid-in adapter piece 3 which is held in its axial position by screws 4 laterally inserted in corresponding openings. This adapter piece 3 is utilized for fastening an end disk 5 which is fastened on the face side on the supporting profile 1 by means of screws 6 which engage in the openings 7 of the adapter piece 3. A lug with an end in the shape of a disk 9 is fastened on the end disks 5, in each case projecting perpendicularly from the disk surface, which disk 9, as illustrated particularly in Figure 3, is provided with a center bore 10. A bolt 11, which is provided with a thread at least at one of its two ends, is guided through this center bore 10, which thread has the purpose of connecting the two disk-type ends 9 of both end disks 5 in a mutually rotatable manner, which end disks 5 are each mounted in the above-described manner on the face side on the supporting profiles 1. Nuts 12 hold the two disks 9 against one another. In order to permit a tool-less assembly, instead of the nuts 12, butterfly nuts may be used in this case. The disks are then, for aesthetic reasons, covered toward the outside by means of one hemisphere 13

respectively, which is screwed onto the thread of the respective bolt 11 by means of a thread part 14 provided in the hemisphere 13. The arrangement according to Figure 1 therefore permits the articulated joining of two supporting profiles in each case by the arrangement of end disks in a corresponding further development.

Figures 5 and 6 show a variant of the further development according to Figure 1. Here, the disk 9 of an end disk 5', which in the embodiment according to Figure 6 has a smaller diameter than the end disks 5 of Figures 1 to 4, is connected with a disk body 15 (Figure 5) whose attachment 16 is, however, not fastened to an end disk. On the contrary, the attachment 16 interacts with a clamping piece 17 which, by way of a screw guided through the bores 18 and a pertaining nut 20, is held on the lug 16 so that it can be swivelled away to the side. Two clamping screws 21 are inserted into threaded bores 22 of the clamping piece 17 and can, in each case, press the free edge 17a of the clamping piece away from the free edge 16a which is provided with an elevation projecting toward the outside, so that, as illustrated by Figure 6, the clamping piece is first slid into the open side of the groove 2 and is then laterally spread open, so that the parts 17 and 16 are jammed inside the groove. In the embodiment of Figure 6, the supporting profiles 1 and 1', which have different diameters, can thereby be connected in an articulated manner.

Figures 7 and 8 show embodiments similar to those of Figures 1 and 6, but with the difference that the supporting profiles 1a and 1a' respectively provided there have a square cross-section and, for this reason, the end disks 5a placed on the end side also have a square construction. In this case, the supporting profile

1a' is provided with smaller dimensions. Otherwise, the construction of the joint itself corresponds to that of Figures 1 and 2 or to the further development according to Figures 5 and 6. It is also possible to combine the end disks 5a or 5a' having the square cross-section by way of a joint (disks 9) with end disks 5 or 5', so that also supporting profiles 1 or 1' with a round cross-section can be mounted in an articulated manner on supporting profiles 1a, 1a'.

Figure 9 shows an arrangement in which two supporting profiles 1 with a round cross-section are fastened in a horizontally aligned manner on a vertically aligned supporting profile 1 which takes place in known fashion in that a turnbuckle is inserted into the center chamber 23 with a rectangular cross-section of the adapter piece 3 (Figure 4), which turnbuckle, as described, for example, in German Patent Document DE-U 298 21 204, is used for fastening the horizontal supporting profiles 1 to the grooves 2 of the vertical supporting profile 1. In order to avoid that the plane faces of the horizontal supporting profile 1 joined to the curvature of the vertical supporting profile 1 leave open an unattractive wedge-shaped space toward the outside and, as a result, are also not fastened in a sufficiently stable manner, according to Figures 10 to 12, an end disk 24 is provided which is constructed as a formed body with a concave curvature 25. As illustrated in Figures 11 and 12, this end disk 24 has a central opening 26 for the guiding through of the above-mentioned turnbuckle and, on both sides of this opening, respective openings 27 through which the screws can be guided which then, as mentioned above by means of Figure 4 for the end disks 5, can be screwed into the openings 7 of the adapter piece 3. In this manner, the end disk 24 can be fixedly connected with the assigned supporting profile 1.

However, it was found that such a fastening by means of screws is not absolutely necessary if the turnbuckle is slid in the above-mentioned manner into the supporting profile with the placed end disk 24. The reason is that the turnbuckle, which is then axially anchored in the adapter piece 3, in the case of a corresponding construction, can also interact with the opening 26 as a stop and in this manner can hold the end disk 24 on the face of a supporting profile 1 without the requirement of special fastening operations by means of screws. If the supporting profile 1, which in the embodiment according to Figure 9 is aligned horizontally, is anchored by means of the turnbuckle in the groove 2, as a result of this fastening operation, the concave recess 25 of the end disk 24 constructed as a formed piece and the latter, in turn, are pressed firmly against the face of the supporting profile 1 and secured. Naturally, it would also be conceivable here to provide end disks 24 with a square cross-section so that also supporting profiles 1a, 1a' with a square cross-section can be connected in a perpendicular manner to supporting profiles 1, 1' having a round cross-section.

Figures 10 and 12 also outline another variant. A sleeve-shaped attachment 28 is illustrated by a broken line which may be part of the end disk 24 and which permits the securing of the end disk 24 on the face of the assigned supporting profile in a manner known per se by means of screws laterally introduced in the sense of the dash-dotted lines 29 in Figure 10.

The construction according to the invention therefore opens up variation possibilities for combining supporting profiles which can be utilized particularly in constructions for fairs, exhibitions or stores for new structural variants.

CLAIMS:

1. Supporting profile for a system for erecting structures which is provided with longitudinally extending grooves on the outside, which grooves are used for the connection of additional supporting profiles (1, 1a) or structural parts of the construction system, which, in the core area, is provided with a receiving chamber (23) for a turnbuckle, which receiving chamber (23) is integrated in an adapter piece (3) which is inserted in guides pointing toward the interior of the supporting profile (1, 1a) and is axially held by means of securing devices which are inserted in bores penetrating the guides,

characterized in that an end disk (5, 24), which is adapted to the cross-section of the supporting profile (1, 1a), is provided for being placed on at least one open face of the supporting profile and is connected with the adapter piece (3).

2. Supporting profile according to Claim 1,

characterized in that the end disk (24) is constructed as a formed body with a concave recess (25) which is adapted to the external curvature of a round profile.

3. Supporting profile according to Claim 2,

characterized in that the formed body (24) is provided with a passage opening (26) for the guiding-through of a turnbuckle.

4. Supporting profile according to Claim 1,

characterized in that the end disk (5, 5a) is provided with a joint part (9, 11) for the connection with additional profiles.

5. Supporting profile according to Claim 4,

characterized in that the joint part consists of a disk (9) which extends perpendicular to the end disk (5, 5a) and has a center bore (10) and of an additional second disk (9) which is connected with the first disk (9) by means of a bolt (11) acting as an axis of rotation and which is equipped with fastening devices for another profile.

6. Supporting profile according to Claim 5,

characterized in that the second disk (9) is connected with another end disk (5, 5a).

7. Supporting profile according to Claim 5,

characterized in that the second disk 9 is provided with a clamping part (16, 17) for the insertion into one of the longitudinally extending grooves (2) of another supporting profile (1).

8. Supporting profile according to Claim 5,

characterized in that hemispheres (13) are provided for the lateral covering of the disks (9).

9. Supporting profile according to Claim 8,

characterized in that the hemispheres (13) have a center bore (14) with a thread and, by means of this thread, are screwed onto a thread at the ends of the bolt (11) penetrating the disks (9).

AMENDED PAGE

Applicant: Octanorm-Vertriebs-GmbH für Bauelemente

(New Claims 1 to 9)

1. Supporting profile for a system for erecting structures which is provided with longitudinally extending grooves on the outside, which grooves are used for the connection of additional supporting profiles (1, 1a) or structural parts of the construction system, the carrying profile, in the area of at least one of its open front ends, having a slid-in adapter piece (3) which is provided with a receiving chamber (23) for a turnbuckle, is inserted in guides pointing toward the interior of the supporting profile (1, 1a) and is axially held by means of securing devices which are inserted in bores penetrating the guides,

characterized in that a disk-type end piece (5, 24), which is adapted to the cross-section of the supporting profile (1, 1a), is provided for being placed on at least the open face of the supporting profile and is connected with the adapter piece (3).

2. Supporting profile according to Claim 1,

characterized in that the end piece (24) is constructed as a formed body with a concave recess (25) which is adapted to the external curvature of a round profile.

3. Supporting profile according to Claim 2,

characterized in that the formed body (24) is provided with a passage opening (26) for the guiding-through of a turnbuckle.

4. Supporting profile according to Claim 1,

characterized in that the end piece (5, 5a) is provided with a joint part (9, 11) for the connection with additional profiles.

5. Supporting profile according to Claim 4,

characterized in that the joint part consists of a first disk (9) which extends perpendicular to the end piece (5, 5a) and has a center bore (10) and of an additional second disk (9) which is connected with the first disk (9) by means of a bolt (11) acting as an axis of rotation and which is equipped with fastening devices for another profile.

6. Supporting profile according to Claim 5,

characterized in that the second disk (9) is connected with another end piece (5, 5a).

7. Supporting profile according to Claim 5,

characterized in that the second disk 9 is provided with a clamping part (16, 17) for the insertion into one of the longitudinally extending grooves (2) of another supporting profile (1).

8. Supporting profile according to Claim 5,

characterized in that hemispheres (13) are provided for the lateral covering of the disks (9).

9. Supporting profile according to Claim 8,

characterized in that the hemispheres (13) have a center bore (14) with a thread and, by means of this thread, are screwed onto a thread at the ends of the bolt (11) penetrating the disks (9).

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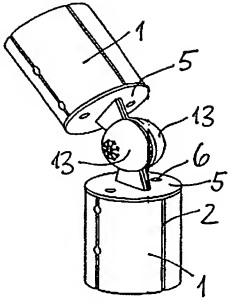
(81) Bestimmungsstaaten *(national)*: CN, CZ, PL, US.

Veröffentlicht:
— *Mit internationalem Recherchenbericht*

Zur Erklärung der Zweibuchstaben-Codes, und der anderen Abkürzungen wird auf die Erklärungen ("Guidance Notes on Codes and Abbreviations") am Anfang jeder regulären Ausgabe der PCT-Gazette verwiesen

(54) Title: SUPPORTING PROFILE

(54) Bezeichnung: TRAGPROFIL



(57) Abstract: The invention relates to a supporting profile for structures used at fairs and exhibitions which is provided, on the exterior thereof, with longitudinally extending grooves for connecting additional supporting profiles, and which, in a core area, comprises a receiving compartment for a turnbuckle. This receiving compartment is part of an adapter piece which is inserted into guides of the supporting profile and which is axially retained by securing means that are inserted into bore holes of the profile. In addition, an end plate is provided which is adapted to the cross-section of the supporting profile, which is placed at least on an open face of the supporting profile, and which is connected to the adapter piece. This end plate can be configured as a shaped body in order to be adapted to the outer curvature of a round profile. In addition, the end plate can also comprise a joint part so that additional supporting profiles can be connected in an articulated manner.

(57) Zusammenfassung: Beschrieben wird ein Tragprofil für Aufbauten auf dem Messe- und Ausstellungssektor, das aussen mit langs verlaufenden Nuten zum Anschluss weiterer Tragprofile versehen ist und im Kernbereich eine Aufnahmekammer für ein Spannschloß aufweist. Diese Aufnahmekammer ist Teil eines Adapterstückes, das in Führungen des Tragprofiles innen eingesetzt und durch Sicherungsmittel axial gehalten ist, die in Bohrungen des Profils eingesetzt sind. Dabei ist eine Endscheibe vorgesehen, die dem Querschnitt des Tragprofiles angepasst ist und die mindestens auf eine offene Stirnseite des Tragprofils aufgesetzt und mit dem Adapterstück verbunden ist. Diese Endscheibe kann als Formkörper zur Anpassung an die Aussenwölbung eines runden Profils ausgebildet sein. Sie kann auch ein Gelenkteil aufweisen, so dass weitere Tragprofile gelenkig anschliessbar sind.

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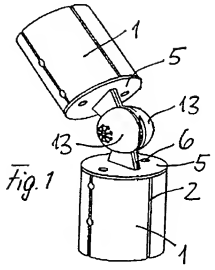

Fig.1

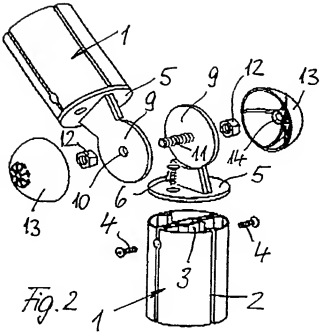

Fig.2

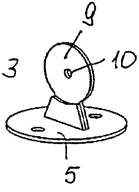

Fig.3

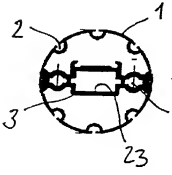

Fig.4

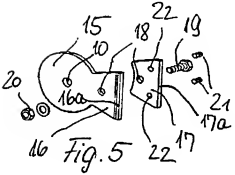

Fig.5

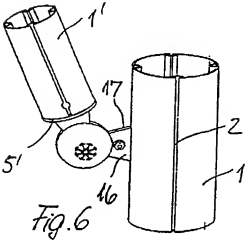

Fig.6

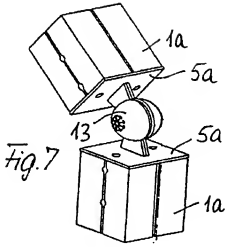

Fig. 7

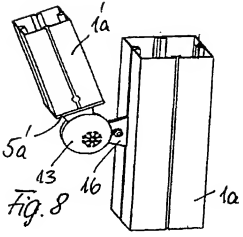

Fig. 8

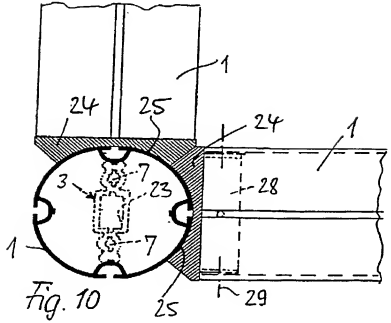

Fig. 10

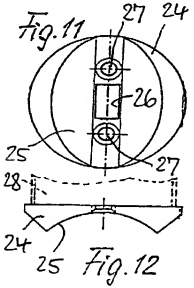

Fig. 11 Fig. 12

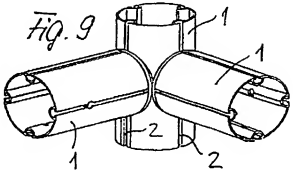

Fig. 9

Attorney Docket No. 396/50809

DECLARATION AND POWER OF ATTORNEY

(For Use with Application Data Sheet)

As the below named inventor(s), I/we declare that:

This declaration is directed to:

- ☐ The attached application, or
- ☐ Application No. _____, filed on _____,
  - ☐ as amended on _____ (if applicable);
- ☒ PCT international application Number **PCT/EP00/06400**, filed on **July 6, 2000**.

I/we believe that I/we am/are the original and first inventor(s) of the subject matter which is claimed and for which a patent is sought;

I/we have reviewed and understand the contents of the above-identified application, including the claims, as amended by any amendment specifically referred to above;

I/we acknowledge the duty to disclose to the United States Patent and Trademark Office all information known to me/us to be material to patentability as defined in 37 CFR 1.56, including material information which became available between the filing date of the prior application and the National or PCT International filing date of the continuation-in-part application, if applicable;

I/we hereby appoint the practitioners at **CROWELL & MORING L.L.P.**, whose Customer Number is:

23911

PATENT TRADEMARK OFFICE

as my/our attorneys to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith; and

All statements made herein of my/our own knowledge are true; all statements made herein on information and belief are believed to be true, and further these statements were made with the knowledge that willful false statements and the like are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001, and may jeopardize the validity of the application or any patent issuing thereon.

FULL NAME(S) of INVENTOR(S)

Signature: _____ Date: _____
Inventor one: Hans BRUDER
Citizen of: Federal Republic of Germany

Signature: _____ Date: _____
Inventor two:
Citizen of:

Signature: _____ Date: _____
Inventor three:
Citizen of:

Signature: _____ Date: _____
Inventor four:
Citizen of:

__ Additional Inventors on Attached sheet if checked

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